

# KODALITH Ortho Film 2556, English Type 3 (ESTAR Base)

## IMPORTANT INFORMATION

Because of product modifications, this film will exhibit the following differences when compared with the previous KODALITH Ortho Film 2556, Type 3 (ESTAR Base) :

- Increased film speed resulting in shorter exposure times (approximately one-fifth to one-half shorter depending on the developer being used).
- Slightly different filter-factor numbers.
- Change in development rate – image appears sooner during development ; shorter development times may be acceptable.
- More sensitive to safelight illumination. Recommendations must be followed and extended time under safelights should be avoided.
- The colour of the anti-halation backing is slightly lighter red compared with the previous product.

These and other data changes are described in this instruction sheet. Other differences may be noted in applications other than normal half-tone and line work. PLEASE READ THIS SHEET CAREFULLY.

- Extremely high-contrast, orthochromatic film.
- Recommended for making line and half-tone negatives and positives for photomechanical reproduction.
- Wide exposure and development latitude.
- Produces sharp half-tone dots suitable for dot-etching.
- Coated on dimensionally stable 0.10 mm thick ESTAR Base.

**Storage:** Store in a cool, dry place, preferably at a temperature below 21 °C (70°F) with a relative humidity below 60%. In tropical climates, keep unused film in the foil bag. Process film as soon as possible after exposure.

**Safelighting:** With care, a safelamp fitted with a KODAK Safelight Filter, No. 1A (light red) and a 200-250 volt pearl lamp up to 25 watts may be used at a distance of 1.2 metres from the film. For countries and areas having 110-120 volt supplies, a 15 watt pearl lamp is recommended.

## GRAPHIC ARTS APPLICATIONS

### EXPOSURE

**Caution:** To prevent pinholes and spots, be sure the film and printing-frame glass are clean and free from dust.

The data given below is intended to serve as guidance for practical trials.

#### Meter settings:

Pulsed-xenon arc	White-flame arc	Tungsten or tungsten-halogen
ISO 12/12° (ASA 12/12 DIN)	ISO 12/12° (ASA 12/12 DIN)	ISO 8/10° (ASA 8/10 DIN)

These settings apply to meters marked for ISO, ASA or DIN speeds as indicated. They are provided primarily as indicators of the relative speed of this film when compared with other KODAK graphic arts materials, for use as an aid in establishing trial exposures. The pulsed-xenon arc value indicates the film's relative speed to pulsed-xenon illumination as measured by a light integrator.

#### Examples of camera exposure:

**Pulsed-xenon arc:** For a same-size (1:1) line reproduction, exposing with two 1500 watt pulsed-xenon arc lamps in reflectors at about 1 metre from the centre of the copy-board, use a trial exposure time of 8 seconds at  $f/22$ .

**Tungsten-halogen:** For a same-size (1:1) line reproduction, exposing with four 500 watt tungsten-halogen (3200 K) lamps in reflectors at about 1 metre from the centre of the copy-board, use a trial exposure time of 16 seconds at  $f/22$ .

**Screen exposures:** When KODAK Contact Screens are used, exposures will be 6 to 12 times longer than for line work. With glass crossline screens, the factor is much higher and varies with the method of use.

**Filter factors:** When a KODAK 'Wratten' Filter is used, multiply the amount of unfiltered exposure by the filter factor shown in the table below. Because lighting conditions vary, these factors may require adjustment.

Light-source	KODAK 'Wratten' Filter				
	No. 8	No. 15	No. 30	No. 47B	No. 58
Pulsed-xenon arc	2.0	6.0	8.0	14.0	5.0
White-flame arc	2.5	8.0	6.0	12.0	5.0
Tungsten or tungsten-halogen	1.5	3.5	12.0	20.0	3.0

## PROCESSING

**Note:** Before mixing or using chemicals for either machine or manual processing, please read cautionary information packed with the chemicals.

### Machine processing

This film is suitable for machine processing in such equipment as the KODALITH Film Processor, Model 324 or the KODAK 'Versamat' Film Processor, Model 317. Details from Kodak Limited, your representative or distributor.

### Manual processing

#### 1. Develop at 20°C (68°F)

KODAK Developer	Development times (minutes)			Useful range * (minutes)
	Half-tone negative	Agitation	Line negative	
KODALITH Super RT	2 $\frac{3}{4}$	Continuous	2 $\frac{3}{4}$	2 $\frac{1}{4}$ to 3 $\frac{1}{4}$
KODALITH	2 $\frac{3}{4}$	Continuous	2 $\frac{3}{4}$	2 $\frac{1}{4}$ to 3 $\frac{1}{4}$
KODALITH Fine Line	—	†(see note below)	2 $\frac{3}{4}$	—
KODALITH Liquid (1+3)	2 $\frac{3}{4}$	Continuous	2 $\frac{3}{4}$	2 $\frac{1}{4}$ to 3 $\frac{1}{4}$

\*Within this range of development times, satisfactory results can usually be obtained.

†With KODALITH Fine Line Developer, use continuous agitation for about 45 seconds; then allow the film to remain at the bottom of the dish without agitation for about 2 minutes.

#### 2. Rinse at 18 to 21°C (64 to 70°F) with agitation.

KODAK Indicator Stop Bath—10 seconds

Kodak formula SB-1a —10 seconds

#### 3. Fix at 18 to 21°C (64 to 70°F) *with frequent agitation.*

KODAK Fixer —2 to 4 minutes

Kodak formula F-5 —2 to 4 minutes

KODAK Rapid Fixer —1 to 2 minutes

#### 4. Wash for about 10 minutes in running water at 18 to 21°C (64 to 70°F). To minimize drying marks, treat in KODAK 'Photo-Flo' Solution after washing, or wipe surfaces carefully with a chamois, a soft, wet viscose sponge, or a soft squeegee such as a windscreen wiper blade.

#### 5. Dry in a dust-free atmosphere.

## Reduction and dot-etching

Normal reduction and dot-etching techniques may be used. Ceric Sulphate Dot-etching Solution, Kodak formula R-20, is suitable for dot-etching and clearing line negatives or positives.

## PROFESSIONAL PHOTOGRAPHY APPLICATIONS

### COPYING LINE ORIGINALS

**Exposure:** Film speed depends upon the developer being used. Trial exposure times given below apply to a same-size (1:1) reproduction exposed with two 500 watt reflector-type photolamps at about 1.4 metres from the centre of the copy.

KODAK Developer	Exposure index	Trial exposure time
D-11	ISO 25/15° (ASA 25/15 DIN)	9 seconds at <i>f/22 or</i> 9 seconds at <i>f/11</i> with a 0.60 neutral density filter
KODALITH Liquid (1+3)	ISO 8/10° (ASA 8/10 DIN)	7 seconds at <i>f/11</i>

Exposure indexes are for tungsten illumination, for use with meters marked for ISO, ASA or DIN speeds as indicated to establish trial exposures in copying. The numbers apply to incident-light meters directly and to reflected-light meters used with the KODAK Neutral Test Card (18% grey side) at the copy-board. A matt white card will serve, in which case expose for five times the calculated exposure time. Exposure indexes apply to lenses focused at infinity. For same-size reproduction, give four times the indicated exposure.

**Development:** Develop at 20°C (68°F) in a dish with continuous agitation.

KODAK Developer	Development time	Useful range
D-11	2½ minutes	2 to 3 minutes
KODALITH Liquid (1+3)	2¾ minutes	2¼ to 3¼ minutes

Rinse, fix, wash, and dry as described for graphic arts applications.

**For further information,** contact your Kodak Graphic Arts Technical Sales Representative or the Regional Sales Centre for your area. If outside the UK, contact your Kodak Marketing Company or distributor.

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